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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/533,075 | 03/22/2000 | Hiroaki Matsuyama | 80184/99 | 8283 |

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EXAMINER

NGO, HUYEN LE

ART UNIT PAPER NUMBER

2871

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/533,075

Applicant(s)

MATSUYAMA ET AL.

Examiner

Julie-Huyen L. Ngo

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/4/2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20, 22 and 24-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22 and 26-28 is/are rejected.
- 7) ☒ Claim(s) 20, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2871

DETAILED ACTION

Claim Objections

Claims 20, 22, 24 and 28 are objected to because of the following informalities:

Claim 20 is objected to because:

- it appears that the liquid crystal molecules on the alignment layer are oriented to different directions NOT just one direction as recited in line 8.
- "said adjacent differently oriented regions," in line 12, lacks antecedence.
- "said pixel electrode," in line 13, should be *_ said each of said pixel electrodes _ _*
- It appears that "a boundary of said adjacent different oriented regions," in lines 14-15, shall be *_ _ said boundary between said adjacent differently oriented regions"*

Claim 22 is objected to because "said differently oriented regions," in line 6, lacks antecedence. It shall be *_ _ adjacent differently oriented regions _ _*. Also, "a boundary of said adjacent different oriented regions," in line 12, shall be *_ _ said boundary between said adjacent differently oriented regions _ _ (see lines 6-7).*

Claim 24 is objected to because "said pixel electrode" in lines 2 and 3, lack antecedence. It shall be *_ said pixel electrodes _ _*.

Art Unit: 2871

All claims that are depended from the above-mentioned claims and are not specifically discussed above are objected as bearing the defects of the claims from which they depend.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 22 and 26-28 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

Claim 22 appears to omit the step of *_ forming at least one aperture under the boundary between adjacent differently oriented regions _ _*.

Claims 26-28 are rejected as bearing the defects of claim 22 from which they depend.

Appropriate correction is required.

Allowable Subject Matter

Claims 20, 22 and 24-28 would be allowable if rewritten or amended to overcome objection and/or the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is an examiner's statement of reasons for allowance:

Claims 20 and 22 are allowable because there is no prior art of record that teaches a liquid crystal display comprising at least one aperture formed in each of the pixel electrodes that forms under a boundary between adjacent differently oriented

Art Unit: 2871

regions of an alignment layer, wherein the minimum width of said at least one aperture of each of said pixel electrodes is equal to a width of a defectively oriented region of the liquid crystal molecules on said boundary between said adjacent differently oriented regions of said alignment layer.

Claims 24-28 are allowable since they depend from the allowable claims.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Julie-Huyen L. Ngo whose telephone number is (703) 305-3508. The Examiner can normally be reached on T-Friday.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Robert H. Kim can be reached at (703) 305-3492.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

May 28, 2003



Julie-Huyen L. Ngo
Patent Examiner
Art Unit 2871